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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,112	02/14/2001	Josh N. Hogan	10971806-3	2220

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

GYORFI, THOMAS A

ART UNIT PAPER NUMBER

2135

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,112

Applicant(s)

HOGAN, JOSH N.

Examiner

Tom Gyorfi

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 10 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 10, and 26-28 remain for examination. The correspondence filed 1/14/05 amended claim 1.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 10, and 26-28 have been considered but are moot in view of the new ground(s) of rejection.
3. Applicant has cited U.S. Patent 6,718,434 in order to define what Applicant has intended as "parity data" in an attempt to establish a distinction between "parity data" and "ECC blocks" for purposes of traversing the rejections. As this reference does not constitute prior art under 35 USC 102, the reference is irrelevant for purposes of prosecution of the instant application, and the arguments derived from Applicant's cited reference are moot.
4. It is noted that Applicant has refrained from filing a terminal disclaimer in response to the double patenting rejections of claims 1 and 26 in the previous Office Action. Accordingly, those rejections are maintained.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 and 26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 8 of U.S. Patent No. 6,252,961. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim recites every element from the claims of the instant application except for two details. With regards to the ECC block that is coded according to an error code correction method, this element is a tautology that adds no new matter over the claim in the instant application; a block of ECC-coded data must, by definition, be encoded according to an error code correction method. With regards to the encryption mask being encoded according to the same error code correction method, note that the patent teaches that the disclosed system would function correctly even if the encryption mask contained errors (Hogan, column 5, lines 60-63). Therefore, it would have been obvious to one of ordinary skill in the art to omit this step, as it would not disrupt the functioning of the remaining elements while simplifying the overall design. See *In re Karlson* 136 USPQ 184 (CCPA 1963)

Claim Rejections - 35 USC § 103

7. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung et al. (U.S. Patent 5,343,525) and further in view of Sako et al. (Japanese Patent JP 09045008 A).

Referring to claims 27 and 28:

Hung teaches a drive comprising a reader (col. 3, lines 5-10) and a controller programmed to perform a bitwise XOR of an encryption mask and a block of [ECC-encoded] data, a product of the bitwise XOR being an encrypted block, the controller further being programmed to output the encrypted block (col. 2, lines 30-60). Hung places no limitations on the type of data that can be encoded, and thus does not explicitly teach that ECC-encoded data can be encrypted. However, Sako teaches that a block of error-corrected code can be encrypted (Sako, Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to permit the encryption of error-corrected data, because it could be used to permit encrypted data to be accessed at high speed (Sako, Abstract).

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneier ("Applied Cryptography, 2nd Edition", previously submitted) and further in view of Sako et al. (Japanese Patent JP 09045008 A).

Schneier teaches a processor (implicitly through the use of computer code to implement the algorithm on page 14) for performing a bitwise XOR of an encryption mask and a block of [ECC-encoded] data, a product of the bitwise XOR being an encrypted block (pages 13-15). Schneier places no limitations on the type of data that can be encoded, and thus does not explicitly teach that ECC-encoded data can be encrypted. However, Sako teaches that a block of error-corrected code can be encrypted (Sako, Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to permit the encryption of error-corrected data, in part because it is simple to implement, and also because it could be used to permit encrypted data to be accessed at high speed (Sako, Abstract).

Allowable Subject Matter

9. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or suggest that the encrypted data is subsequently processed for further error code correction.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

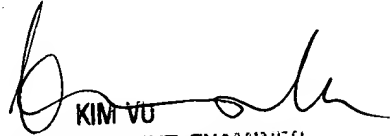
- U.S. Patent 4,780,905 issued to Cruts et al.
- U.S. Patent 5,128,996 issued to Rosenow et al.
- U.S. Patent 5,325,430 issued to Smyth et al.
- "An XOR-Based Erasure-Resilient Coding Scheme" published by Bromer, Johannes et al. ©1995 International Computer Science Institute.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Gyorfi whose telephone number is (571) 272-3849. The examiner can normally be reached on 8:00am - 4:30pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TAG
5/13/05


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